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(54) BELT FOR A HANDRAIL OF A MOVING WALK, HANDRAIL AND MOVING WALK

(57) The invention relates to a belt (22) for a handrail (16) of a moving walk (10), wherein the belt (22) has a flat cross sectional shape in a plane perpendicular to a moving direction (100) of the belt (22) and a thickness (t) of not more than 10 mm. The invention further relates to a handrail (16) and a moving walk (10).

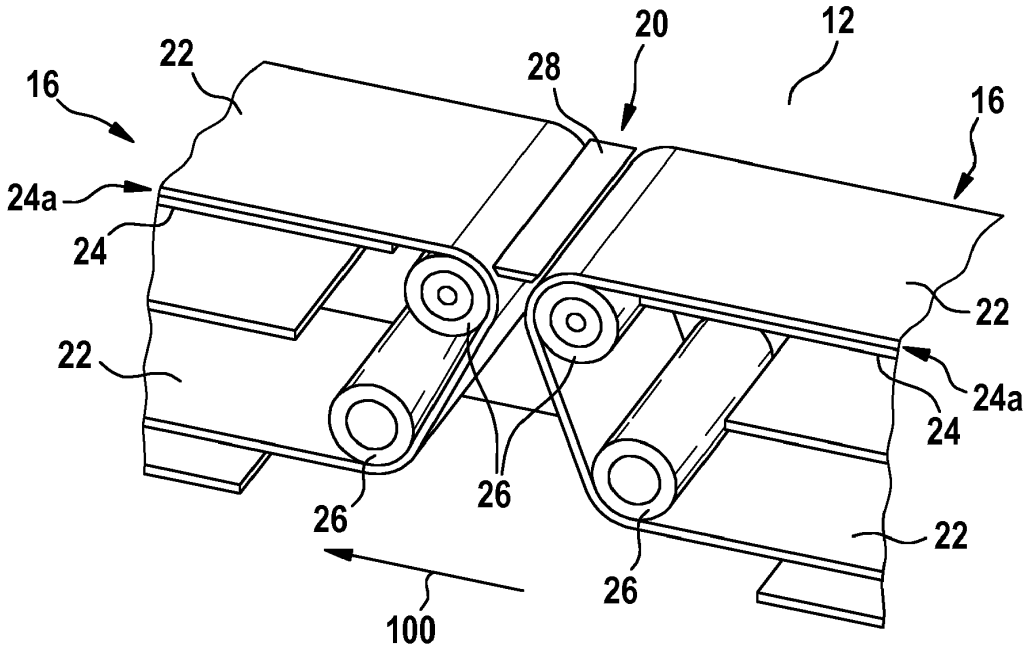

Fig. 2A

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Description

Field of the invention

[0001] The present invention relates to a belt for a handrail of a moving walk, a handrail and a moving walk. Therefore, the invention is related to the technical field of transportation systems, especially to moving walks and escalators and in particular acceleration moving walks.

Background of the Invention

[0002] Typical moving walks, such as horizontal moving walks and/or ascending walks and/or escalators comprise at least one, more commonly two, adjacent balustrades, which confine the moving walk on both longitudinal sides. These balustrades support handrails, which comprise moving belts that allow passengers to hold on for support. Moving walks moving in longitudinal direction with a constant speed typically comprise one or more handrails, the belts of which move essentially with the same speed, i.e. a possible relative speed and/or speed mismatch between the moving walk and the belts is minimized.

[0003] Furthermore, acceleration moving walks are known, which allow a higher travelling or moving speed in a middle section of the moving walk while moving at a more moderate speed at the entrance and the exit of the moving walk. By providing entrances and exits moving with such moderate speeds, entering and exiting the moving walk is facilitated, since the relative speed of the moving walk and the ground outside the moving walk is reduced at the entrance and the exit of the moving walk, while a middle section of the moving walk may travel at a higher speed. Thus, the moving walk may comprise a one-piece walkway and on one or both sides a multi-piece combination of handrails.

[0004] Due to the different sections of an acceleration moving walk moving at different velocities, acceleration moving walks suffer from the disadvantage that the moving speed of the moving walk and of the moving belts its handrails may not be perfectly matched at every position along the moving direction. For reducing the mismatch of the speeds of the acceleration moving walk and the belts, typically several handrails are provided adjacent to one another along the longitudinal or moving direction of the moving walk, wherein the belts of the handrails at the entrance and the exit section are configured to move at a slower speed than in a middle section, in which also the moving walk travels at a higher speed.

[0005] A handrail comprises a moving endless belt transported along the balustrade between two turnaround sections. Such a belt must be deflected at the turnaround sections. Due to adjacent turnaround sections of longitudinally adjacent belts, undesired gaps between adjacent handrails or belts occur, in which the passenger may be required to move his hand from one belt to the other belt. In order to prevent passengers from getting their hands caught in-between two adjacent belts, the gap is typically covered by means of a cover member. However, at such a gap, the passenger typically does not have any means for holding on, since no moving belt is available in this section, and a relative speed between the walkway and the balustrade can be very high.

[0006] It is therefore the technical problem of the invention to provide a handrail for a moving walk minimizing the sections in which no moving belt is available for passengers to hold on to.

[0007] This problem is solved by a belt, a handrail and a moving walk comprising the features of the respective independent claims. Preferred embodiments are the subject-matter of the dependent claims and the following description.

Disclosure of the invention

[0008] In one aspect the invention relates to an endless handrail belt of a moving walk or an escalator, wherein the belt has a flat cross sectional shape in a plane perpendicular to a direction of its longitudinal extension and a thickness in a range of 1 to 10 mm. The belt is provided in a closed or endless form, i.e. such that its beginning and end are attached to each other or, in other words, that the belt does not have a beginning and an end.

[0009] The term shall especially imply that the width is larger than the thickness, in a ratio from 100/1 to 4/1. Thus, such a flat cross sectional shape can also include non-rectangular shapes, such as elliptical shapes.

[0010] In another aspect the invention relates to a handrail for a moving walk, the handrail extending between a first end and a second end. The handrail comprises a belt according to the invention, a support element for slidably supporting the belt along the handrail and at least one pulley, or turnaround guides for deflecting the belt at the first end and/or the second end of the handrail.

[0011] Advantageously, the handrail comprises two pulleys or turnaround guides at the first and/or the second end of the handrail for deflecting the belt, which are vertically and horizontally offset from one another.

[0012] In another aspect the invention relates to a moving walk comprising at least one handrail according to the invention.

[0013] In another aspect the invention relates to a moving walk comprising at least two handrails according to the invention, wherein the at least two handrails are arranged along the moving direction of the moving walk longitudinally adjacent to each other, wherein a transition gap between each of the at least two handrails has an extension in the moving direction of the moving walk in the range of 30 to 100 mm, preferably 30 to 60 mm.

[0014] According to a preferred embodiment of the invention, the moving walk according to the invention is provided as an accelerating moving walk and/or the at least two handrails are configured to move at different constant speeds with respect to each other, wherein the

different constant speeds are preferably at least partially matched to the speed of the moving walk at the position of the respective handrail along the moving direction of the moving walk.

[0015] The moving walk preferably extends in a plane, which may extend horizontally, i.e. perpendicular to the Earth's gravitational force and/or may be arranged ascending and/or declining in a slope. Specially, the moving walk may be configured as an escalator.

[0016] The belt having a flat cross sectional shape means that a width of the belt is larger than its thickness. The term shall especially imply that the width is larger than the thickness, in a ratio from 100/1 to 4/1. Thus, such a flat cross sectional shape can also include non-rectangular shapes, such as elliptical shapes. In particular, when arranged in parallel to a horizontally moving moving walk, the belt may have a larger extension in a direction perpendicular to its longitudinal extension, i.e. the moving direction of a moving walk, and perpendicular to the Earth's gravitational force than in a direction perpendicular to the moving direction and parallel to the Earth's gravitational force. The width of the belt may be suitable for a human passenger of the moving walk to hold on and, thus, may be adapted to an average hand size of passengers of the moving walk, such as an average sized adult person. The width however of the flat belt is preferably significantly smaller than its width, and may be minimized to be as thin as possible while ensuring sufficient stability to be used as a belt for a handrail of a moving walk.

[0017] The support element preferably is a rigid element, which provides a preferably flat support surface for supporting the belt such that the belt may be moved over the support element. In particular, the support element is preferably configured to allow the belt sliding along the moving direction over the support element. "Supporting" preferably means that the belt may be held in its vertical and/or horizontal position and may be stabilized by the Earth's gravitational force on top of the support element, wherein the belt may be slid in moving direction of the moving walk over the support element of the handrail. Further the support element advantageously comprises a housing element, which is configured and adapted to at least partially cover side regions of the belt.

[0018] As mentioned, the belt is provided in a closed or endless form, i.e. that its beginning and end are attached to each other or that the belt does not have a beginning and an end. Thus, by means of at least one pulley, preferably two pulleys wherein preferably at least one of the pulleys may be driven, the belt may be moved and/or conveyed in an endless-movement over the supporting element along the moving direction of the moving walk while moving against, i.e. antiparallel, to the moving direction preferably below the supporting element.

[0019] Advantageously, the handrail comprises two pulleys or turn around guides at the first and/or the second end of the handrail for deflecting the belt, which are vertically and horizontally offset from one another.

[0020] Two handrails being longitudinally adjacent to each other means that the two handrails are preferably arranged following one another in the moving direction or longitudinal direction of the moving walk. In other words, such handrails are in single-line configuration. Thus, when moving along the moving walk, a passenger may first reach a first handrail and then a second handrail of the two longitudinally adjacent handrails. Preferably, the two adjacent handrails do not overlap each other along the moving direction, i.e. in longitudinal direction, and/or perpendicular to the are not shifted and/or displaced relative to each other perpendicular to the moving direction and/or longitudinal direction, albeit such an overlap or displacement may be provided in some embodiments of the invention.

[0021] The transition gap between each of the at least two handrails relates to a section between the two longitudinally adjacent handrails, in which one handrail ends and the following handrail starts. In the transition gap no handrail may be usable for a passenger to hold on. In particular, the transition gap may relate to a section along the moving direction, in which the belts of the respective handrails are deflected by a respective pulley and thus do not move parallel to the moving direction but at least partially perpendicular to the moving direction, such as in a vertical direction, and/or antiparallel to the moving direction. In particular, the transition gap relates to a section, in which the belt of the handrail may not be comfortably used by a passenger, since the direction, in which the belt moves, significantly deviates from the moving direction of the moving walk. For instance, the position along the moving direction, at which the moving direction of the belt deviates by more than 10°, or 20° or 30° or 40° from the moving direction of the moving walk due to the deflection of the belt by a pulley may be set as the beginning of the transition gap. In an equivalent manner, the position, at which the moving direction of the belt of the following handrail deviates by less than 10°, or 20° or 30° or 40° from the moving direction of the moving walk due to the deflection of the belt by a pulley may be set as the end of the transition gap.

[0022] The transition gap is preferably at least partially covered, for instance by means of a cover element. Covering the transition gap at least partly prevents objects and/or passenger's hands getting caught -between two longitudinal adjacentbelts.

[0023] The invention offers the advantage that a small radius of curvature can be achieved when deflecting the belt in turnaround sections of the handrail. For instance, a radius of curvature in the range of 100 to 160 mm can be achieved by means of the claimed invention. As a consequence thereof, small pulleys (as compared to pulleys conventionally used for this purpose) may be used for deflecting the belt running in a handrail and, thus, the transition gap between two longitudinally adjacent handrails can be significantly reduced. Due to the small minimum radius of curvature of the belt according to the claimed invention, for instance a pulley having a diameter

in the range of 20 to 60 mm may be used for deflecting the belt, which is significantly less than the diameter of pulleys used in conventional handrails using belts with a larger minimum radius of curvature.

[0024] Especially the flat cross sectional shape of the belt and its small thickness of not more than 10 mm allow achieving a high pliability and/or flexibility at least in the special dimension, in which the thickness extends. Hence, a small (minimum) radius of curvature can be achieved without the belt suffering from material stress and/or damages.

[0025] Therefore, the invention offers in particular a technical advantage for handrails of acceleration moving walks, in which it is often desired to arrange several handrails behind each other, i.e. longitudinally adjacent along the moving direction of the moving walk. Due to the small minimum radius of curvature achievable according to the claimed invention and the option of using pulleys having small diameters, such as for instance 35 mm, the transition gap between two adjacent handrails being arranged longitudinally adjacent to each other, can be significantly reduced as compared to conventional handrails of acceleration moving walks. Therefore, passengers travelling on the moving walk will face only negligible transition gaps between longitudinally adjacent handrails and therefore do not face any problems to hold on.

[0026] Preferably the belt has a thickness in the range of 2 mm to 8 mm, preferably 3 mm to 7 mm, more preferably 4 mm to 6 mm. The smaller the thickness, the smaller is typically also the achievable minimum radius of curvature and the smaller the minimum required extension of the transition gap. However, if the thickness of the belt is chosen to be too small, the mechanical stability of the belt may be insufficient to sustain the mechanical stress during its use in a handrail. Thus, most preferably the belt has a thickness of 4 mm to 5 mm, since this range of thickness offers a suitable compromise between stability and flexibility and/or pliability.

[0027] Preferably the cross sectional shape of the belt is at least partially elliptic al/or the cross sectional shape of the belt is at least partially rectangular and preferably comprises at least one rounded corner. These cross sectional shapes may offer a good aspect ratio to achieve a flat belt having a good flexibility and/or pliability. However, also other cross sectional shapes may be used for the belt which allow providing a flat belt, having a significantly larger width than thickness. Preferably, the ratio of width over thickness (w/t) of the belt may be at least 10, more preferably at least 15, most preferably at least 20. However, the ratio w/t preferably is not more than 100, more preferably not more than 75, much more preferably not more than 50, most preferably not more than 30. The belt has a width (w) in a range of 20 mm to 100 mm, preferably 30 mm to 80 mm, more preferably 40 mm to 60 mm.

[0028] Preferably the belt comprises a flat sliding surface to be arranged on a support element of a handrail and the sliding surface of the belt is more preferably at least partially covered by a low-friction material. For instance, the support element may comprise an aluminium profile or consist of such or be formed of such. The support surface, thus, may be a straight and/or flat surface of the support element and may be adapted to the sliding surface of the belt or vice versa. The supporting element supports the belt to ensure a sliding movement of the belt along the handrail. For reducing the friction between the support surface and the sliding surface of the belt sliding on the support surface, the support surface and/or the sliding surface may for instance be coated with a, preferably thin, layer of low friction material. Most preferably, the whole or part of the support surface and/or sliding surface which comes into contact with each other when operating the handrails is covered with the low-friction material. For example, the low-friction material may contain polytetrafluoroethylene or consist of such.

[0029] Other advantageously usable low friction materials includetechnical plastics such as PET (polyethylene), PTFE or POM C (polyacetal copolymer).

[0030] Preferably the belt comprises a bendable polymeric material. This may further increase the flexibility and/or pliability of the belt to achieve a small minimum radius of curvature. Most preferably the bendable polymeric material may comprise polyurethane or consist of such. Polyurethane has suitable properties with respect to mechanical robustness, flexibility and/or pliability and cost-efficiency.

[0031] Further advantages and embodiments of the invention will become apparent from the description and the appended figures.

[0032] It should be noted that the previously mentioned features and the features to be further described in the following are usable not only in the respectively indicated combination, but also in further combinations or taken alone, without departing from the scope of the present invention.

[0033] In the drawings:

Figure 1 shows a schematic perspective view of a section of a moving walk according to preferred embodiment.

Figures 2A and 2B show a transition gap between two handrails according to a preferred embodiment in a schematic perspective view and in a cross sectional view, respectively.

Figure 3 depicts in a cross sectional view a handrail according to another embodiment.

Figure 4A depicts in a schematic cross sectional view a belt according to a preferred embodiment configured as a flat belt having rounded corners.

Figure 4B depicts in a schematic cross sectional view a support element according to a preferred embodiment.

Detailed description of the Figures

[0034] Figure 1 shows in a schematic perspective view a longitudinal section of a moving walk 10 according to a preferred embodiment. The moving walk 10 comprises a walkway 10, on which the passengers can stand and/or walk to travel in the moving direction 100. The walkway 12 itself is driven by a drive means such as an electric motor (not shown) and moves in moving direction 100. Furthermore, the moving walk 10 comprises a balustrade 14, which limits the walkway 12laterally. The balustrade 14 comprises several balustrade panels 18 forming a rigid wall separating the walkway 12 from its surrounding. In addition, the moving walk 10 comprises several handrails 16 adjacent to one another in longitudinal direction, which are arranged on top of the balustrade panels 18 and form part of the balustrade 16 itself.

[0035] In the section of the moving walk 10 depicted in Figure 1, two handrails 16 are arranged adjacent to one another in longitudinal direction along the moving direction 100 (i.e. in single-line configuration), wherein the two handrails 16 are separated by a transition gap 20. At one side of the transition gap 20 along the moving direction 100, the first of the two handrails 16 ends and at the other side of the transition gap the second of the two handrails 16 begins. Each of the handrails 16 comprises an endless moving belt 22, which is conveyed such as to move along the moving direction 100 at essentially the same speed as the walkway 12. At the beginning and the end of the respective handrail 16, i.e. in respective turnaround sections, the belt is deflected by a respective pulley or turnaround guide (not shown) to allow the belt to turn back against the moving direction 100, i.e. to move in a direction opposite to a moving direction 100, for example within a lower section of the balustrade (not shown in Figure 1). Thus, the belt 22 is, as mentioned, configured as an endless belt allowing an endless movement along handrail 16 in moving direction 100 on the upper side of the handrail, and against the moving direction 100 in a lower section of the handrail.

[0036] As can be seen in Figure 1, the transition gap 20 has a very limited extension along the moving direction and therefore merely constitutes a small slit or gap between the two adjacent handrails 16. This gap, in which no moving belt 22 is available for a passenger moving on the moving walk 10 along the moving direction, is minimal and, thus, negligible. Furthermore, the transition gap 20 is covered by a cover element 28 (see Figures 2A and 2B) to prevent passengers from catching their hands in the transition gap between the two handrails 16 and/or to prevent objects from getting stuck between the two handrails 16.

[0037] The belt 22 of each of the handrails 16 is provided as a flat belt. The width, i.e. the extension of the belt 22 in horizontal, i.e. transversal, direction 102 perpendicular to the moving direction 100 and perpendicular to the vertical direction 104 (parallel to the Earth's gravitational force) may be adapted to an average hand size of an adult passenger, for instance to 100 mm. The thickness of the belt 22, which is its extension along vertical direction 104, is 10 mm or less and, thus, significantly smaller than the width of the belt. Hence, the belt has a flat cross sectional shape which allows a small radius of curvature around the pulleys at the beginning and the end of the respective handrail 16.

[0038] Figures 2A and 2B show a transition gap 20 between two handrails 16 according to a preferred embodiment in a schematic perspective view (Figure 2A) and in a cross sectional view (Figure 2B). In particular, Figure 2 shows the handrails 16 without any side cover, thus revealing the inner structure of the handrails 16. The belts 22 of the handrails 16 are each supported by a respective support element 24, wherein the support elements 24 may be provided for instance as an aluminum profile and/or plastics profile or form part of such. In particular, the support elements 24 comprise a flat support surface 24a at their upper side to allow the respective belt 22 to slide in the moving direction 100 while in mechanical contact with the support surface 24a. The shape and optionally the material of the support element 24 are adapted to the belt 22 in order to minimize friction between the support surface 24a and the belt sliding on the support surface 24a. Optionally the support element 24 may comprise a low-friction material 24b (see Figure 4B) covering the support surface 24a in order to further minimize friction. This allows conveying the belt of a handrail over long distances, such as up to several hundreds of meters.

[0039] At the beginning and at the end of each handrail 16, the belt 22 is deflected by two pulleys or turnaround guides 26 to transport the belt 22, being an endless belt, back against the moving direction 100 below the upper surface of the handrail 16. The handrails 16 may be equipped with an identical configuration of pulleys 26 at the beginning and at the end of the handrail 16.

[0040] Alternatively, different kinds of pulleys may be provided at the beginning and at the end. One or several pulleys 26 of the handrail 26 may be driven by an electric motor (not shown) in order to convey the belt 22. The diameter d of the pulleys 26 is very small as compared to pulleys of conventional handrails and may be as small as 3 cm to 4 cm. This allows achieving a small transition gap 20, since the radius of curvature of the belts 22 being deflected by the pulleys 26 is only about few centimeters. Thus, providing a belt 22 having a flat cross sectional shape and a thickness of not more than 10 mm, in particular when combined with pulleys 26 of small diameters, allows minimizing the transitional gap 20.

[0041] Between the two handrails 16, the transmission gap 20 is located, which is covered with a cover element 28. The cover element 28 prevents objects and/or passenger's hands from getting caught between the two handrails 16. As can be seen in the embodiment, the cover element 28 is almost flush with the upper surface of the belts 22 in vertical direction 104 leaving only a minimum height difference between the upper surfaces

of the belts 22 and the cover element 28. By doing so, the risk of a passenger's hand getting caught between the two belts 22 is minimized, because the passenger's hand can only slide over the cover element 28 when reaching the transition gap 20. Hence, the cover element 28 increases safety and comfort of passengers travelling on the moving walk 10. It is also possible to provide a cover element 28 at the same height as the upper surface of the belt 22.

[0042] The support element 24 is adapted regarding its width to the width of the belt 22 sliding on the support element 24. According to the embodiment shown in Figure 2, the support element 24 does not exceed the width of the belt 22. Preferably, it corresponds exactly to the width of the belt 22. In addition to the support element 24, a housing element 32 (see Figure 3) may be provided to house and/or protect the sides of the belt 22 and/or in order to prevent an intrusion of a passenger's hand and/or an object between the belt 22 and the support element 24. Such a housing element 32 may be provided as a separate element and/or as a part of the support element 24. For instance a profile, such as an aluminum profile, may be provided comprising respective structures forming the support element 24 and the housing element 32.

[0043] Figure 3 depicts in a cross sectional view a handrail 16 according to another embodiment. The cross sectional view relates to a plane perpendicular to the moving direction 100. The handrail 16 is mainly formed by a handrail profile 30, which may be arranged on top of a balustrade 14 and/or form a top end of a balustrade 14. In particular the handrail profile 30 may be attached to the balustrade panels 18.

[0044] According to this preferred embodiment, the handrail profile 30 is provided as an aluminum profile having several structures. One of these structures is a housing element 32 which is adapted to house at least partially the support element 24 and the belt 22, wherein the housing element 32 is in particular adapted to cover the sides of the belt 22 to prevent passenger's hands and/or fingers and/or other objects to intrude between the belt 22 and the support element 24. Furthermore, the housing element 32 incorporates the support element 24, which is provided separately from the handrail profile 30 and is preferably made of a low friction plastic to reduce the friction between the support surface 24a of the support element 24 and the belt 22. Alternatively or additionally, the support surface 24a may be covered with a low-friction material 24b (see Figure 4B). For instance the support surface 24a may be coated with polytetrafluoroethylene. Using a handrail profile 30 offers the advantage that the manufacturing of the handrail is facilitated since only a limited number of pieces is required.

[0045] Figure 4A depicts in a schematic cross sectional view a belt 22 according to a preferred embodiment configured as a flat belt having rounded corners 22a. The ratio of width (w) to thickness (t) is not illustrated true to scale for the sake of better visibility. The belt 22 is coated on its sliding surface 22b with a low-friction material 22c to minimize friction between the belt 22 and the support element 24. Figure 4B depicts in a schematic cross sectional view a support element 24 according to a preferred embodiment. On the upper side, the support element 24 is equipped with a low-friction material 24b which covers the whole support surface 24a and, thus, forms a new support surface 24a having a minimized friction for a belt 22 sliding on the support surface 24a. According to some embodiments, providing a low-friction material 22a, 24b either at the sliding surface 22b of the belt or at the support surface 24a of the support element 24 may be sufficient. However, according to other embodiments, the belt 22 and the support element 24 may both be provided with a low-friction material 22c, 24b.

Reference signs

[0046]

10	moving walk
12	walkway
14	balustrade
16	handrail
18	balustrade panel
20	transition gap
22	belt
22a	rounded corner (of the belt)
22b	sliding surface
22c	low-friction material
24	support element
24a	support surface
24b	low-friction material
26	pulley / turnaround guide
28	cover element
30	handrail profile
32	housing element
100	moving direction
102	horizontal direction
104	vertical direction

Claims

1. Endless handrail belt (22) for a handrail (16) of a moving walk (10) or an escalator, wherein the belt (22) has a flat cross sectional shape in a plane perpendicular to its longitudinal extension (100) and a thickness (t) in a range of 1 mm to 10 mm.

2. Belt according to claim 1, wherein the belt (22) has a thickness (t) in the range of 2 mm to 8 mm, preferably 3 to 7 mm, more preferably 4 to 6 mm and/or wherein the belt (22) has a width (w) in a range of 20 to 100 mm, preferably 30 to 80 mm, more preferably 40 to 60 mm.

3. Belt (22) according to claim 1 or 2, wherein the cross sectional shape of the belt (22) is at least partially ellipticalor wherein the cross sectional shape of the belt (22) is at least partially rectangular and preferably comprises at least one rounded corner (22a).

4. Belt (22) according to any one of the preceding claims, wherein the belt (22) comprises a flat sliding surface (22b) adapted to be arranged on a support element (24) of a handrail (16) and the sliding surface (22b) of the belt (22) is preferably at least partially covered by a low-friction material (22c).

5. Belt (22) according to any one of the preceding claims, wherein the belt (22) comprises a bendable polymeric material, preferably polyurethane.

6. Handrail (16) for a moving walk (22), the handrail extending between a first end and a second end, comprising:

- a belt (22) according to any one of the preceding claims;
- a support element (24) for slidably supporting the belt (22) along the handrail (16).;
- at least one pulley (26) or turnaround guide for deflecting the belt (22) at the first end and/or at the second end of the handrail (10).

7. Handrail according to claim 6, wherein at the first and/or the second end of the handrail two pulleys or turnaround guides (26) for deflecting the belt are provided, which are vertically and horizontally offset from one another.

8. Handrail according to claim 6 or 7, wherein the support element comprises a housing element (32), which is configured and adapted to at least partially cover side regions of the belt.

9. Handrail (16) according to any one of the claims 6 to 8, wherein the at least one pulley (26) or turnaround guide has a diameter in the range of 20 mm to 60 mm.

10. Handrail (16) according to any one of the claims 6 to 9, wherein a support surface of the support element (24) is at least partially covered by a low-friction material (24b) to reduce a friction between the support element (24) and the belt (22) when sliding on the support surface (24a) of the support element (24).

11. Handrail (16) according to any one of the claims 6 to 10, wherein the support element (24) has a flat support surface (24a) for slidably supporting the belt (22) along the handrail (16).

12. Moving walk (10) comprising at least one belt according to any one of the claims 1 to 5 or a handrail (16) according to any one of the claims 6 to 11.

13. Moving walk (10) comprising at least two handrails (16) according to any one of the claims 6 to 11, wherein the at least two handrails (16) are arranged along the moving direction (100) of the moving walk longitudinally adjacent to each other, wherein a transition gap (20) between the at least two handrails (16) has an extensionin the moving direction (100) of the moving walk in the range of 30 to 100 mm, preferably 30 to 60 mm.

14. Moving walk (10) according to claim 13, wherein the moving walk is provided as an accelerating moving walk and/or wherein the at least two handrails (16) are configured to move at different constant speeds with respect to each other, wherein the different constant speeds are preferably at least partially matched to the speed of the moving walk (10) at the position of the respective handrail (16) along the moving direction (100) of the moving walk (10).

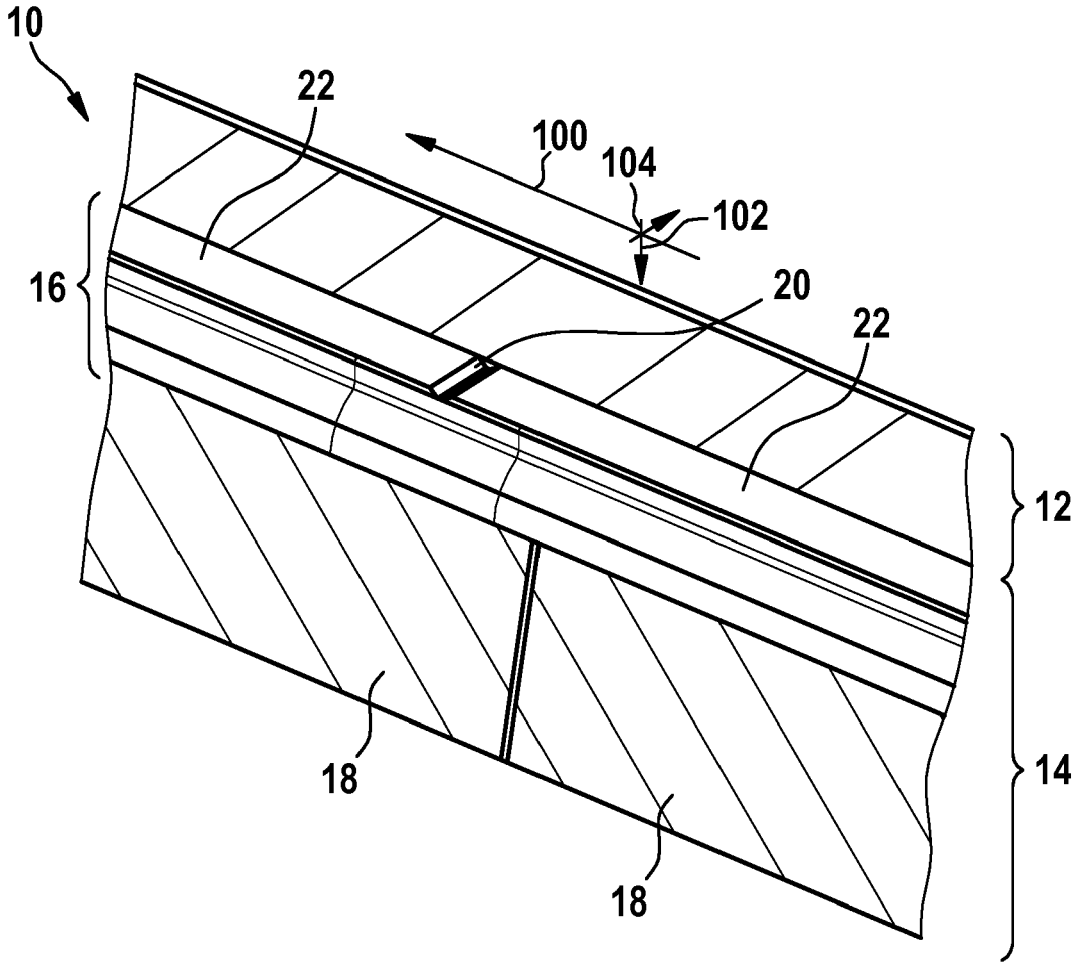

Fig. 1

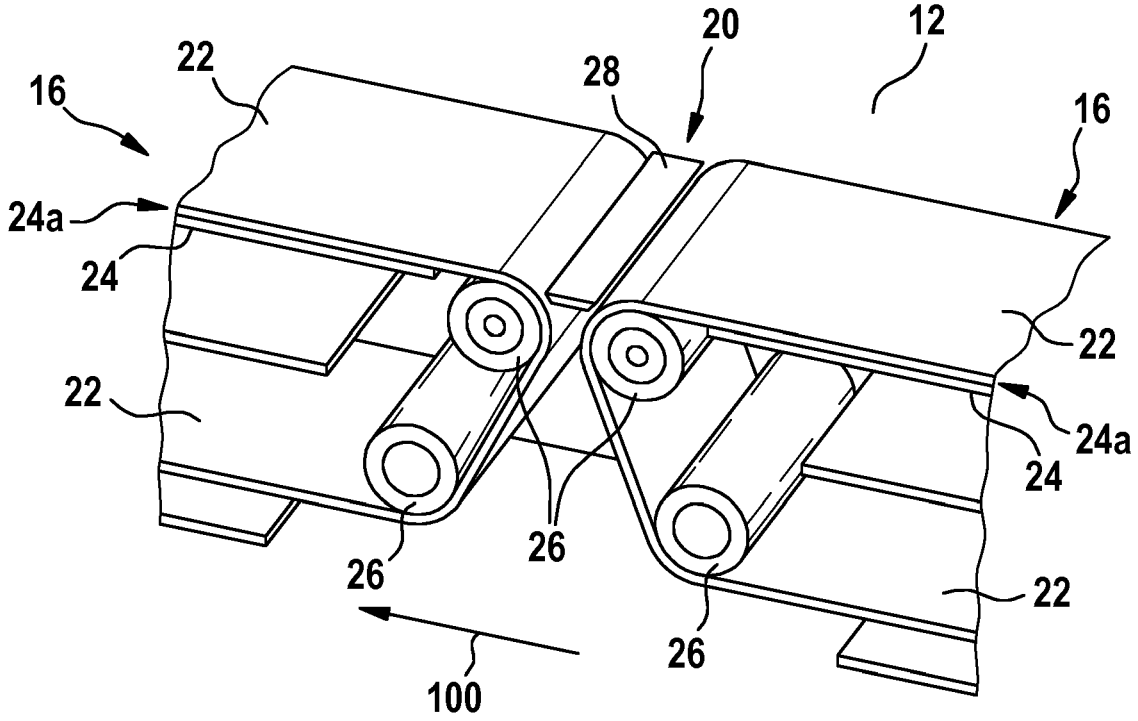
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Fig. 2A

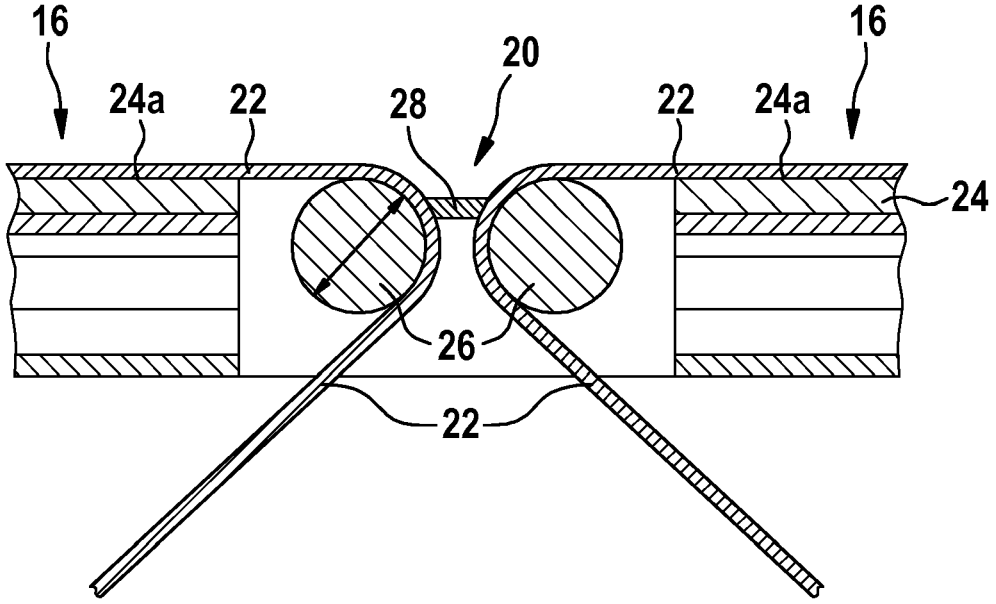
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Fig. 2B

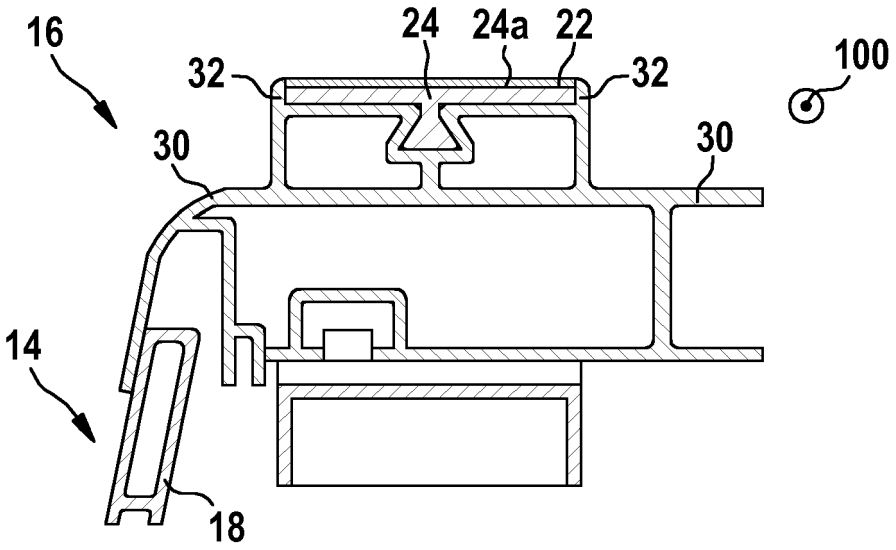

Fig. 3

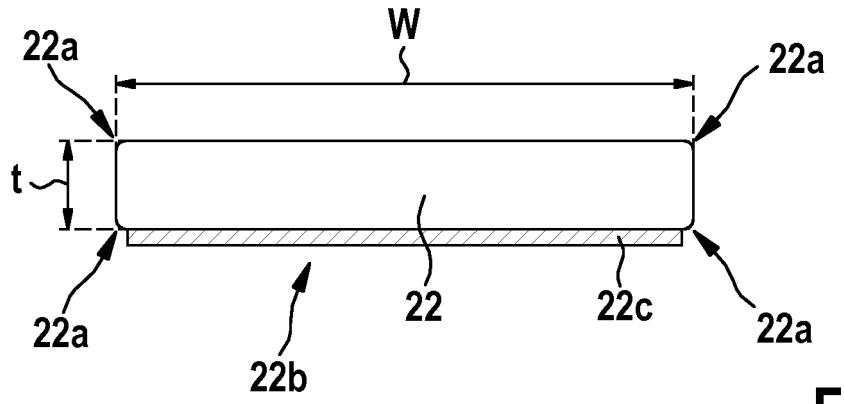

Fig. 4A

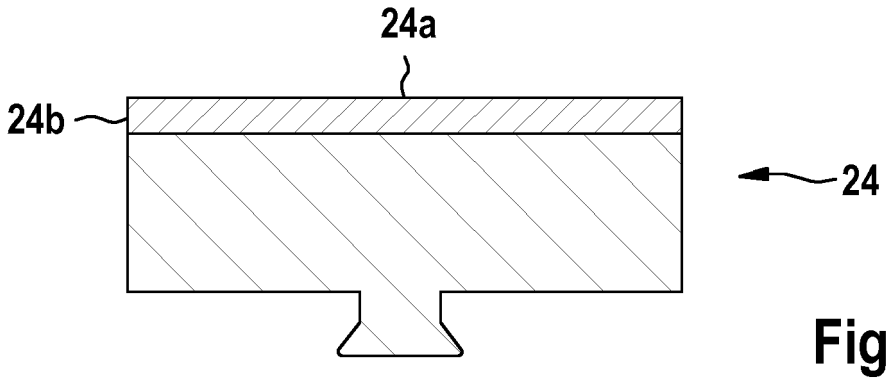

Fig. 4B

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EUROPEAN SEARCH REPORT

Application Number
EP 18 38 2405

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	11 December 2018	Miklos, Zoltan

CATEGORY OF CITED DOCUMENTS

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